

REMARKS

Claims 1-24 were pending. Claims 1-24 stand rejected. Claims 18 and 24 were cancelled. Claims 1, 10-11, 17, 19, and 21-23 were amended. Claims 1-17 and 19-23 remain in the application.

Claims 1, 2, 10, 17, and 24 stand rejected under 35 U.S.C. 112, second paragraph. As to Claim 1, the rejection stated:

'Claim 1 recites the limitation "the sequence" in part (b) of the claim on page 14. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 states:

'A method for encoding a transition in an MPEG bitstream sequence ...'
(emphasis added)

Claim 1 has been amended, however, to replace the phrase 'the sequence' with 'the bitstream'. This change provides uniform usage of 'bitstream' in dependent claims.

As to Claim 2, the rejection stated:

'Claim 2 recites the limitation "the pictures" in line 1 of the claim on page 14. There is insufficient antecedent basis for this limitation in the claim.'

This rejection is not understood. It is noted that Claim 2 is dependent upon Claim 1, which states:

1. A method for encoding a transition in an MPEG bitstream sequence including anchor pictures and bidirectionally predicted (B) pictures, said method comprising the steps of:
 - a) coding first and second anchor pictures; and
 - b) coding a transition in the bitstream by inserting B pictures into the bitstream to create the transition from the first anchor picture to the second anchor picture. (emphasis added)

The limitation 'the pictures' refers to anchor pictures and B pictures.

As to Claims 10, 17, and 24 the rejection stated:

'Claim 10 provides for the use of "the method of claim 1", claim 17 provides for the use of "the method of claim 11", and claim 24 provides for the use of "the method of claim 18" but, since the claim does not set forth any steps involved in the method/process, it is unclear what

method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practices.

Claims 10, 17, and 24 also stand rejected under 35 U.S.C. 101. The rejection stated:

'the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101.'

Claim 24 was cancelled.

These rejections are not understood. Claims 10 and 17 are dependent claims and necessarily incorporate the limitations of the respective base claims, including the purportedly missing steps. To help advance prosecution, Claims 10 and 17 have been amended to recite the steps of the respective base claims. The changed language adds words, but is not believed to change the substance of these claims. It is requested, therefore, that the Examiner withdraw these rejections based upon amended Claims 10 and 17 or that the Examiner suggest a return of Claims 10 and 17 to their original language.

Claims 1-24 stand rejected under 35 U.S.C. 102(e) as being anticipated by Jun et al. in Proceedings of the eighth ACM international conference on Multimedia published October 2000 (hereafter 'Jun').

As to Claim 1, the rejection cited Jun section 3, on page 392 and Figure 1. Jun states in part of the cited section:

'A dissolve-transition is a transition from one scene to other scene by linearly decreasing the intensity of the first scene and linearly increasing the intensity of the second scene in the mixed region'.

The section continues with a discussion of a detection algorithm. Figure 1 of Jun illustrates a GOP structure having the order: I B B B P B B B P B B B P B B B I.

Amended Claim 1 states:

1. A method for encoding a transition in a video bitstream sequence including anchor pictures and bidirectionally predicted (B) pictures, said method comprising the steps of:
 - a) coding first and second anchor pictures; and

b) coding a transition in the bitstream by inserting only B pictures into the bitstream to create the transition from the first anchor picture to the second anchor picture.

The changed language of Claim 1 is supported by the application as filed, notably, the original claims and at page 5, lines 5-17, and Figure 1. (See also the discussion of Figure 3 beginning at page 6, line 22.) Claim 1 was broadened by replacing the term 'MPEG' with 'video'.

Claim 1 requires:

'... coding a transition in the bitstream by inserting only B pictures into the bitstream ...'

Jun discloses a mixed sequence of types B and P pictures.

Claims 2-10 are allowable as depending from Claim 1.

As to Claims 11-24, the rejection relies upon the same rationale as for Claims 1-10.

Amended Claim 11 states:

11. A method for encoding a transition in a video bitstream sequence including anchor pictures and predicted (P) pictures, said method comprising the steps of:

- a) coding a first anchor picture; and
- b) coding a transition by inserting only P pictures into the bitstream to create the transition from the first anchor picture to a second anchor picture.

The changed language of Claim 11 is supported by the application as filed, notably, the original claims and at page 7, lines 18-24; page 7, line 29 to page 9, line 10. Claim 11 was broadened by replacing the term 'MPEG' with 'video'.

Claim 11 requires:

'... coding a transition by inserting only P pictures into the bitstream ...'

Jun discloses a mixed sequence of types B and P pictures.

Claims 12-17 are allowable as depending from Claim 11 and as follows.

Claims 14-16 state:


14. The method claimed in claim 11, wherein the pictures are comprised of macroblocks that are either intra coded or predicted and

wherein the second anchor picture is replaced with a P picture with the majority of the macroblocks replaced by macroblocks predicted from the previous P picture in the transition.

15. The method claimed in claim 11, wherein the pictures are comprised of macroblocks that are either intra coded or predicted and where the inserted P pictures comprise macroblocks predicted from either the first anchor picture or a previous inserted P picture and intra coded macroblocks copied from the second anchor picture.

16. The method claimed in claim 11, wherein the pictures are comprised of macroblocks that are either intra coded or predicted and wherein the predicted macroblocks contain motion vectors that are comprised of horizontal and vertical components that are integer multiples of 16.

Claims 14-16 each require that the pictures are comprised of macroblocks that are either intra coded or predicted. This is not compatible with the B pictures shown in Figure 1 of Jun and discussed at length in Section 3.1 of Jun.

 Claim 14 also requires that the second anchor picture is replaced with a P picture. Where does Jun disclose replacement of an anchor picture with a P picture?

Claim 15 also requires that the inserted P pictures comprise macroblocks predicted from either the first anchor picture or a previous inserted P picture and intra coded macroblocks copied from the second anchor picture. Where is this disclosed in Jun?

Claim 16 also requires that the predicted macroblocks contain motion vectors that are comprised of horizontal and vertical components that are integer multiples of 16? Where is this disclosed in Jun?

Claim 18 was cancelled.

Claims 19-20 were amended to depend from Claim 21 (discussed below) and are allowable on that basis.

Amended Claim 21 states:

21. A method for encoding a transition in a video bitstream sequence including anchor pictures, bidirectionally predicted (B) and predicted (P) pictures, said method comprising the steps of:

a) coding a first anchor picture; and
b) coding a transition by inserting B and P pictures into the bitstream to create the transition from the first anchor picture to a second anchor picture;

wherein the inserted P pictures comprise macroblocks predicted from either the first anchor picture or a previous inserted P picture and intra coded macroblocks copied from the second anchor picture.

Amended Claim 21 is supported by the application as filed, notably, the original claims. Claim 21 was rewritten as an independent claim and was broadened by deletion of some of the original language.

Claim 21 requires:

'... the inserted P pictures comprise macroblocks predicted from either the first anchor picture or a previous inserted P picture and intra coded macroblocks copied from the second anchor picture ...'

and is allowable on grounds discussed above in relation to Claim 15.

Claim 22 states:

22. A method for encoding a transition in a video bitstream sequence including anchor pictures, bidirectionally predicted (B) and predicted (P) pictures, said method comprising the steps of:

a) coding a first anchor picture; and
b) coding a transition by inserting B and P pictures into the bitstream to create the transition from the first anchor picture to a second anchor picture;

wherein the inserted B pictures comprise macroblocks that are forward predicted, backward predicted, or interpolated.

Amended Claim 22 is supported by the application as filed, notably, the original claims. Claim 22 was rewritten as an independent claim and was broadened by deletion of some of the original language.

Claim 22 requires that the inserted B pictures comprise macroblocks that are forward predicted, backward predicted, or interpolated. In other words, the macroblocks of the B pictures are not intra coded. Jun does not disclose this feature, since Jun treats intra coded and interpolated macroblocks the same. (See Figures 2 and 3 and related discussion.)

Claim 23 is allowable as depending from Claim 21 and as follows.

Claim 23 states:

23. The method claimed in claim 21, wherein the macroblocks of the P pictures that are not intra coded contain motion vectors comprised of horizontal and vertical components that are integer multiples of 16.

Claim 23 requires that macroblocks of the P pictures that are not intra coded contain particular motion vectors. Where is this disclosed in Jun?

Claim 24 was cancelled.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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